

Remarks

The various parts of the Office Action (and other matters, if any) are discussed below under appropriate headings.

Claim Rejections - 35 USC § 102 and § 103

The Examiner states that applicants' arguments filed February 23, 2006 were considered but not persuasive. The Examiner then states that a new ground(s) of rejection is made in view of newly found prior art.

In the body of the present Office Action, the Examiner never addresses the §102(e) rejections of the previous Office Action. Moreover, the Examiner, in discussing the new grounds of rejection, admits that *Seeley* (US 6,484,049) does not teach the step of calibrating an x-ray device in a medical navigation system to obtain registering information enabling x-ray image acquired by the x-ray device in any one of a plurality of different positions to be registered in the navigation system, and using the calibrated x-ray device to produce a plurality of x-ray images of the patient from different positions.¹ Thus, by the Examiner's own admission, the previous rejection under 35 USC §102(e) cannot stand. If the Examiner believes the previous rejection under 35 USC §102(e) is proper, the Examiner is requested to reinstate the rejection so that the issue can be resolved. If not reinstated, it will be presumed for the record that the rejection cannot be maintained.

Regarding the new grounds of rejection, claims 1-11 stand rejected under 35 USC §103(a) as being unpatentable over *Seeley* in view of *Vilsmeier* (US 2003/0185346). Withdrawal of the rejection is respectfully requested for at least the following reasons.

Claim 1 recites a method for displaying images of a patient in a medical navigation system assisted by x-ray images. Specifically, an x-ray device is calibrated in the medical navigation system to obtain registering information enabling an x-ray image acquired by the x-ray device in any one of a plurality of different positions to be registered in the navigation system. The calibrated x-ray device then is used to produce a plurality of two-dimensional x-ray images of the patient from different positions. It is noted that during the producing step, positions of the x-ray device are

¹ Page 2 of the Office Action

determined using the medical navigation system. In other words, in addition to calibrating the x-ray device in the medical navigation system, its position also is obtained by the medical navigation system. The relevance of this point is discussed in more detail below with respect to *Vilsmeier*.

Regarding calibration as recited in claim 1, an exemplary calibration is discussed in the specification. To calibrate the x-ray device, for example, a navigation system can determine a position of the x-ray device relative to a calibration phantom. Then, transformational matrices concerning the spatial position of the recorded x-ray images can be produced, and the transformational matrices assigned to the individual x-ray images can be transferred to the navigation system when the original two-dimensional x-ray images are transferred.²

As discussed in the previous reply, by calibrating the x-ray device in the medical navigation system prior to obtaining images of the patient, the x-ray images can be registered in the navigation workspace as soon as they are produced.

As admitted by the Examiner, *Seeley* does not teach calibrating an x-ray device in a medical navigation system to obtain registering information enabling an x-ray image acquired by the x-ray device in any one of a plurality of different positions to be registered in the navigation system, and using the calibrated x-ray device to produce a plurality of x-ray images of the patient from different positions as recited in claims 1, 7 and 8. According to the Examiner, however, *Vilsmeier* teaches these features. Applicants respectfully disagree with the Examiner for at least the following reasons.

Vilsmeier teaches a system and method that uses generic patient data (e.g., generic data of an average male or female, and not necessarily derived from the current patient) and, based on patient specific information such as landmarks, characteristic points, or the like, the system and method modifies the generic patient data so as to approximate or otherwise represent characteristics of the patient.³ In other words, x-ray data of the current patient may be obtained without subjecting the patient to x-ray imaging.

² See page 4, lines 3-10 of the specification.

³ See, e.g., paragraphs [0009], [0011] and [0012].

While *Vilsmeier* states that the position of medical treatment devices are detected by a position detection unit, no teaching has been found in *Vilsmeier* that an x-ray device is calibrated. As noted above, claim 1, in addition to calibrating the x-ray device, also includes determining a position of the x-ray device. *Vilsmeier* discloses that a position of a medical treatment device may be determined by a position detection unit. *Vilsmeier*, however, has not been found to teach that an x-ray device is calibrated in the medical navigation system to obtain registering information enabling an x-ray image acquired by the x-ray device in any one of a plurality of different positions to be registered in the navigation system, and using the calibrated x-ray device to produce a plurality of two-dimensional x-ray images of the patient from different positions, as recited in claims 1, 7 and 8. Moreover, the Examiner has not identified such teachings in *Vilsmeier*.

Accordingly, the Examiner has not established a *prima facie* case of obviousness and, therefore, the rejection must be withdrawn.

Conclusion

In view of the foregoing, request is made for timely issuance of a notice of allowance.

Respectfully submitted,
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